WHAT IS CLAIMED IS:

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1. An image processing apparatus for detecting a noise area in image data generated by decoding encoded data encoded by a frequency transform method and a lossy compression method, the image processing apparatus comprising:

motion detection means for detecting motion in an area having at least one pixel in said image data;

deviation detection means for detecting the deviation of the image motion in the area having at least one pixel; and

noise detection means for detecting the noise area in accordance with the deviation of the image motion.

2. An image processing apparatus according to Claim 1, wherein said deviation detection means detects the deviation of the image motion in accordance with the deviation of the norm of the image motion.

3. An image processing apparatus according to Claim 1, wherein said deviation detection means detects said deviation of image motion in accordance with the deviation of the direction of the image motion.

4. An image processing apparatus according to Claim 1, wherein:

said motion detection means detects a motion vector as the motion; and

said deviation detection means detects the deviation of the image motion in accordance with the deviation of said motion vectors.

5. An image processing apparatus according to Claim 1, wherein:

said motion detection means detects a motion vector as the motion, converts the motion vector to a one-dimensional value as the motion, and outputs said one-dimensional value; and

said deviation detection means detects said deviation of the image motion in accordance with the deviation of said one-dimensional value.

6. An image processing apparatus according to Claim 5, wherein said noise detection means detects said noise area by comparing the deviation value of said one-dimensional value with a predetermined threshold value.

7. An image processing apparatus according to Claim 1, further comprising:

decoding means for decoding the encoded image data encoded by the frequency transform method and the lossy compression method;

noise reduction means for reducing the amount of noise of said noise area detected by said noise detection means; and

selective outputting means for selectively outputting one of said decoded image data from said decoding means and said image data to said noise detection means and said noise reduction means according to a control signal.

8. An image processing apparatus according to Claim 7, wherein said deviation detection means detects said deviation of the image motion in accordance with the deviation of the norm of the image motion.

9. An image processing apparatus according to Claim 7, wherein said deviation detection means detects said deviation of the image motion in accordance with the deviation of the direction of the image motion.

10. An image processing apparatus according to Claim 7, wherein:

said motion detection means detects a motion vector as the motion; and

said deviation detection means detects said deviation of the image motion in accordance with the deviation of said motion vectors.

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11. An image processing apparatus according to Claim 7, wherein:

said motion detection means detects a motion vector as the motion, converts the motion vector into a one-dimensional value as the motion, and outputs said one-dimensional value; and

said deviation detection means detects said deviation of the image motion in accordance with the deviation of said one-dimensional value.

12. An image processing apparatus according to Claim 11, wherein said noise detection means detects said noise area by comparing the deviation value of said one-dimensional value with a predetermined threshold value.

13. An image processing method for detecting a noise area in image data generated by decoding encoded data encoded by a frequency transform method and a lossy compression method, the image processing method comprising the steps of:

detecting motion in an area having at least one pixel

in the image data;

detecting deviation of the image motion in the area having at least one pixel; and

detecting the noise area in accordance with the deviation of the image motion.

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14. An image processing method according to Claim 13, wherein said deviation of the image motion is detected in accordance with the deviation of the norm of said image motion.

15. An image processing method according to Claim 13, wherein said deviation of the image motion is detected in accordance with the deviation of the direction of said image motion.

16. An image processing method according to Claim 13, wherein:

a motion vector is detected as the motion; and

said deviation of the image motion is detected in accordance with the deviation of said motion vectors.

17. An image processing method according to Claim 13, wherein:

a motion vector is detected as the motion and converted

to a one-dimensional value as said motion, and said one-dimensional value is output; and

said deviation of the image motion is detected in accordance with the deviation of said one-dimensional value.

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18. An image processing method according to Claim 17, wherein said noise area is detected by comparing the deviation value of said one-dimensional value with a predetermined threshold value.

19. An image processing method according to Claim 13, further comprising the steps of:

decoding the encoded image data encoded by a frequency transform method and a lossy compression method thereby outputting decoded image data;

selective outputting one of said decoded image data and said image data to noise reduction means according to a control signal; and

reducing the amount of noise of said noise area detected in the noise detection step.

20. An image processing method according to Claim 19, wherein said deviation of the image motion is detected in accordance with the deviation of the norm of the image motion.

21. An image processing method according to Claim 19, wherein said deviation of the image motion is detected in accordance with the deviation of the direction of said image motion.

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22. An image processing method according to Claim 19, wherein:

a motion vector is detected as the motion; and

said deviation of the image motion is detected in accordance with the deviation of said motion vectors.

23. An image processing method according to Claim 19, wherein:

a motion vector is detected as the motion and converted into a one-dimensional value as said motion, and said one-dimensional value is output; and

said deviation of the image motion is detected in accordance with the deviation of said one-dimensional value.

24. An image processing method according to Claim 23, wherein said noise area is detected by comparing the deviation value of said one-dimensional value with a predetermined threshold value.

25. A storage medium for storing a computer-controllable program for detecting a noise area in image data generated by decoding encoded data encoded by a frequency transform method and a lossy compression method, said computer program comprising the steps of:

detecting motion on an area having at least one pixel in said image data;

detecting the deviation of image motion on the area having at least one pixel; and

detecting the noise area in accordance with the deviation of image motion.

26. A storage medium according to Claim 25, wherein said deviation of image motion is detected in accordance with the deviation of the norm of said image motion in the deviation detection step.

27. A storage medium according to Claim 25, wherein said deviation of image motion is detected in accordance with the deviation of the direction of said image motion in the motion detection step.

28. A storage medium according to Claim 25, wherein:

a motion vector is detected as the motion in the motion detection step; and

said deviation of the image motion is detected in accordance with the deviation of said motion vectors in the deviation detection step.

29. A storage medium according to Claim 25, wherein the program further comprising the steps of:

converting from a motion vector detected in the motion detection step into a one-dimensional value as said motion; and

outputting said one-dimensional value as said motion.

30. A storage medium according to Claim 29, wherein said deviation of the image motion is detected in accordance with the deviation of said one-dimensional value in the deviation detection step.

31. A storage medium according to Claim 29, wherein said noise area is detected by comparing a deviation value of said one-dimensional value with a predetermined threshold value in the noise detection step.

32. A storage medium according to Claim 25, wherein said computer program further comprises the steps of:

decoding the encoded image data encoded by the frequency transform method and the lossy compression method

thereby outputting decoded image data;

selective outputting one of said decoded image data from said decoding step and said image data to noise reduction means according to a control signal; and

reducing noise of said noise area detected in the noise detection step.

33. A storage medium according to Claim 32, wherein said deviation of image motion is detected in accordance with the deviation of the norm of said image motion in the motion detection step.

34. A storage medium according to Claim 32, wherein said deviation of image motion is detected in accordance with the deviation of the direction of said image motion in the deviation detection step.

35. A storage medium according to Claim 32, wherein:

a motion vector is detected as the motion in the motion detection step; and

said deviation of the image motion is detected in accordance with the deviation of said motion vectors in the deviation detection step.

36. A storage medium according to Claim 32, wherein

said program further comprising the steps of:

converting from a motion vector detected in the motion detection step into a one-dimensional value as said motion; and

outputting said one-dimensional value as said motion.

37. A storage medium according to Claim 36, wherein said deviation of the image motion is detected in accordance with the deviation of said one-dimensional value in the deviation detection step.

38. A storage medium according to Claim 32, wherein said noise area is detected by comparing a deviation value of said one-dimensional value with a predetermined threshold value in the noise detection step.